



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,406	06/23/2003	Pavel Novak	03685-P0004B	7777
24126 7590 08/31/2007 ST. ONGE STEWARD JOHNSTON & REENS, LLC 986 BEDFORD STREET STAMFORD, CT 06905-5619			EXAMINER DAILEY, THOMAS J	
			ART UNIT 2152	PAPER NUMBER
			MAIL DATE 08/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/601,406	Applicant(s) NOVAK, PAVEL	
	Examiner Thomas J. Dailey	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-82 are pending in this application.

Response to Arguments

2. Applicant's arguments filed June 25, 2007 have been fully considered but they are not persuasive.
3. The applicant argues, with respect to the independent claims 1, 22, 40-43, 64 and 82, that Bauer (US Pat. 5,788,688) fails to teach a data stream generated by at least one of said at least one ancillary medical devices, with a higher bandwidth than said surgical network is capable of transmitting. Specifically, the applicant contends that if the camera is reading on the "ancillary device" then the camera does not transmit a data stream with a higher bandwidth than the surgical network is capable of transmitting.
4. The examiner disagrees. The camera does transmit a data stream with a higher bandwidth than the surgical network is capable of transmitting as the surgical devices making up the surgical network (column 3, lines 6-10) use IEEE-488 or RS-485 (Fig. 3, labels 76, 100, and 102) both are digital standards that have been in use for several decades and are not utilized to transmit video data, either in this system or in the art. Further, given the set up of Bauer's system (i.e. the segregation of the video data handling from the surgical equipment management

(Fig. 3, labels 90 and 76)) and the applicant own admission that high-bandwidth data is video data ([0031]), it is inherent that the standards used to manage the surgical devices do not have sufficient bandwidth to support the additionally load of video data and thereby this necessitated the need for the second interface as disclosed in Bauer (Fig. 3, label 90).

5. The applicant further argues, with respect to claims 42 and 82, that the examiner is taking an unfair reading of the claim terms to assert that the same control unit is both a medical device in the surgical network and the controller that controls the surgical network.
6. The examiner disagrees and points to the applicant's own specification where it states, "In some embodiments, the surgical controller 30 is actually one of the devices 22, 24, 26, 48." ([0028], lines 1-2). Therefore, the examiner does not consider this interpretation unfair.
7. The applicant further argues, with respect to claim 42, that the examiner is unfairly reading the monitor as an ancillary network, and therefore Bauer does not teach an ancillary network. The applicant additionally states that they are viewing the monitor as the "video network" the examiner referred to in the Official Action, as it was unclear what the "video network" was. Lastly, the applicant

contends that the camera control unit and/or camera are in fact part of the surgical network.

8. The examiner disagrees. While Bauer never mentions, explicitly, "a video network," it does disclose, as cited previously, a collection of interconnected devices used to process video (column 7, line 60-column 8, line 6). This is the video network (a network that processes videos that includes the frame store card, video card, endoscopic camera, etc.) Clearly, given the definition of a network and the cited portion of Bauer, the examiner did not envision the term "video network" would be interpreted as simply the monitor, and hopes clarification has been made. With respect to the assertion that the camera control unit and/or the camera are in fact part of the surgical network, this is incorrect as Fig. 3, clearly indicates the segregated video network (ancillary network) and surgical equipment network (surgical network); the Frame store card (label 90) interfacing with the video related devices and IEEE-488 or RS-485 Card (label 76) interfacing with the surgical equipment devices.
9. Lastly the applicant argues, with respect to claims 22, 41, and 64, that the examiner did not address the limitations "at least one ancillary medical device not connectable to said surgical network," and "feedback data generated by said at least one ancillary medical device and communicated to said translator."

10. The examiner disagrees. The examiner rejected these claims by the same rationale set forth in claim 42's rejection for brevity's sake. Clearly, the "at least one ancillary medical device not connectable to said surgical network" that generates feedback data in the instant claims is synonymous with claim 42's medical device which generates a data stream (feedback data) that is "communicated to said ancillary network, with a higher bandwidth than said surgical network is capable of transmitting," (i.e. the medical device transmits data via an ancillary network (ancillary medical device) and is incapable (not connected) of transmitting using the surgical network). Claim 42's recitation of these limitations is in fact narrower, as instead of just referring to an ancillary medical device as recited in the instant claims, claim 42 recites a medical device explicitly connected to an ancillary network. In conclusion, while the limitations are not verbatim the same, the scope and clear synonymous relationship between the claims allowed the examiner to reject the instant claims by the same rationale that was used in claim 42's rejection in order to expedite prosecution and they are thusly maintained.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-2, 9-12, 18-23, 30-33, 39-44, 51-54, 60-65, 72-75, and 81-82 are rejected under 35 U.S.C. 102(b) as being anticipated by Bauer et al (US Pat. 5,788,688) hereafter "Bauer."

13. As to claim 40, Bauer discloses a system for controlling both primary medical devices, which are part of a surgical network, and ancillary medical devices (Abstract), comprising:

- a surgical network (column 2, lines 53-57);

- an input device, connected to said surgical network, for inputting a medical command (column 3, lines 3-6);

- a controller, connected to said surgical network; for receiving the medical command and generating corresponding medical command data (column 3, lines 10-19);

- at least one primary medical device, connected to said surgical network, having a first translator for receiving and translating the medical command data (column 3, lines 6-10);

- at least one ancillary medical device, in communication with the first translator, for receiving the translated medical command data and carrying out the corresponding medical command (column 3, lines 6-10, associated surgical instrument reads on ancillary medical device);

a data stream, generated by at least one of said at least one ancillary medical devices, with a higher bandwidth than said surgical network is capable of transmitting (column 3, lines 20-25, video image signal reads on data stream, and further column 7, line 60-column 8, line 6, disclose how the video images are processed, i.e. they are not carried over the same media and do not utilize the same controller that the commands used since they occupy more bandwidth than the commands);

and a second translator, in communication with said surgical network, for receiving and translating said data stream (column 7, line 65-column 8, line 2, video signal (data stream) is translated to be displayed on the HUD).

14. As to claim 42, a system for controlling medical devices, comprising:

a surgical network (column 2, lines 53-57);

an input device, connected to said surgical network, for inputting a medical command (column 3, lines 3-6);

a controller, connected to said surgical network, for receiving the medical command and generating corresponding medical command data (column 3, lines 10-19);

an ancillary network (column 7, line 60-column 8, line 6, the video network reads on the ancillary network as it is separate from the command and control network of the medical devices in that it uses different transmission media and translators);

a medical device connected to said surgical network (Fig. 3, label 66, and column 7, lines 25-30), said device having

a first interface, by which said medical device is connected to said surgical network (Fig. 3, label 76, and column 8, lines 18-25 (Note that there is an error in the specification: In the written description it refers to the general purpose interface bus card as label 96 of Fig. 3, but it clearly should be referencing label 76 of Fig. 3);

a second interface, by which said medical device is in communication with said ancillary network (Fig. 3, label 90 and column 7, line 65-column 8, line 6); and

a data stream, generated by said medical device and communicated to said ancillary network, with a higher bandwidth than said surgical network is capable of transmitting (column 3, lines 20-25, video image signal reads on data stream, and further column 7, line 60-column 8, line 6, disclose how the video images are processed, i.e. they are not carried over the same media and do not utilize the same controller that the commands used since they occupy more bandwidth than the commands).

15. As to claims 1 and 43, they are rejected by the same rationale set forth in claim 40's rejection.

16. As to claims 22, 41, 64, and 82, they are rejected by the same rationale set forth in claim 42's rejection.

17. As to claims 2, 23, 44, and 65, Bauer discloses said input device is connected to said controller (column 3, lines 3-10).

18. As to claims 9, 30, 51, and 72, they are rejected by the same rationale set forth in claim 42's rejection.

19. As to claims 10, 31, 52, and 73, Bauer discloses an ancillary controller connected to said ancillary network (column 7, line 65-column 8, line 2).

20. As to claims 11, 32, 53, and 74, Bauer discloses said ancillary network includes an ancillary input device (Fig. 3, label 74 and column 7, line 60-column 8, line 6).

21. As to claims 12, 33, 54, and 75, Bauer discloses said ancillary input device is connected to said ancillary controller (Fig. 3, label 74 and column 7, line 60-column 8, line 6).

22. As to claims 18, 39, 60, and 81, Bauer discloses said translator includes a lookup table for performing translations (inherent in column 3, lines 6-10).

Art Unit: 2152

23. As to claims 19 and 61, Bauer discloses said data stream is video data, the system further comprising a monitor, which is connected to said surgical network, for reproducing said video data as a video image after said video data has been translated by said translator (column 7, line 60-column 8, line 6).

24. As to claims 20 and 62, Bauer discloses the video image is a live video feed (column 7, line 60-column 8, line 6).

25. As to claims 21 and 63, Bauer discloses at least one primary medical device, and the video image is a visual representation of at least one of said primary or ancillary medical devices (column 7, line 60-column 8, line 6).

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 3-4, 8, 13-14, 17, 24-25, 29, 34-35, 38, 45-46, 50, 55-56, 59, 66-67, 71, 76-77, and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer as applied to claims 1, 22, 43, and 64 above, and further in view of Flach et al (US Pat. 6,589,170), hereafter "Flach."

28. As to claims 3, 24, 45, and 66, Bauer discloses the invention substantially with regard to the parent claims 1, 22, 43, and 64, but is silent on the translator being in communication with at least one of said at least one ancillary medical devices via an Ethernet connection. Rather, Bauer's invention utilizes a similar means of communication, an 8 bit parallel bus, but chooses not to use Ethernet.

However, Flach discloses a similar invention (Abstract) that utilizes Ethernet to communicate between medical devices, translators, and controllers (column 7, lines 13-25)).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bauer and Flach in order to utilize the flexibility and increasing availability of Ethernet based networks.

29. As to claims 4, 25, 46, and 67, Bauer discloses the invention substantially with regard to the parent claims 1, 22, 43, and 64, but is silent on the translator being in communication with at least one of said at least one ancillary medical devices via a wireless connection.

However, Flach discloses a similar invention (Abstract) that utilizes wireless connections to communicate between ancillary medical devices and their translators and controllers (column 1, lines 14-18).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bauer and Flach in order to utilize the flexibility and increasing availability of wireless based networks.

30. As to claims 8, 29, 50, and 71, they are rejected by the same rationale set forth in claims 3, 24, 45, and 66's rejections.

31. As to claims 13, 34, 55, 76, they are rejected by the same rationale set forth in claims 3, 24, 45, and 66's rejections.

32. As to claims 14, 35, 56, 77, they are rejected by the same rationale set forth in claims 4, 25, 46, and 67's rejections.

33. As to claims 17, 38, 59, and 80, they are rejected by the same rationale set forth in claims 3, 24, 45, and 66's rejections.

Art Unit: 2152

34. Claims 5, 15, 26, 36, 47, 57, 68, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Flach as applied to claims 4, 14, 25, 35, 46, 56, 67, and 77 above, and further in view of what was well known in the art.

35. As to claims 5, 26, 47, and 68, Bauer and Flach disclose the invention substantially with regard to the parent claims 4, 25, 46, and 67, and further disclose wireless capability (Flach, column 1, lines 14-18).

Although Bauer and Flach do not explicitly suggest the use of Bluetooth, Official Notice is taken (MPEP 2144.01) that Bluetooth technology was a well-known wireless standard at the time of the applicant's invention was made, which is deployed to enhance wireless communication and user convenience. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to take advantage of a known standard to modify the teachings of Bauer and Flach in order to achieve such benefits.

36. As to claims 15, 36, 57, 78, they are rejected by the same rationale set forth in claims 5, 26, 47, and 68's rejections.

37. Claims 6-7, 16, 27-28, 37, 48-49, 58, 69-70, and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer as applied to claims 1, 22, 43, and 64 above, and further in view of Suzuki (US Pat. 7,103,646).

38. As to claims 6, 27, 48, and 69, Bauer discloses the invention substantially with regard to the parent claims 1, 22, 43, and 64, but is silent on said surgical network includes a self-configuring bus. Rather, the Bauer does not get into the specifics of how the bus handles the configuration of devices.

However, Suzuki discloses a device-controlling network that includes a self-configuring bus (column 1, lines 4-9 and column 2, lines 34-43).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bauer and Suzuki in order to give greater ease of use for the devices that are attached to Bauer's invention and will therefore decrease the responsibilities of the user.

39. As to claims 7, 28, 49, and 70, Suzuki and Bauer disclose the invention substantially with regard to the parent claims 6, 27, 48, and 69, and further disclose said bus is a CAN bus (column 1, lines 4-9).

40. As to claims 16, 37, 58, and 79, they are rejected by the same rationale set forth in claims 6, 27, 48, and 69's rejections.

Conclusion

41. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

42. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory


Art Unit: 2152

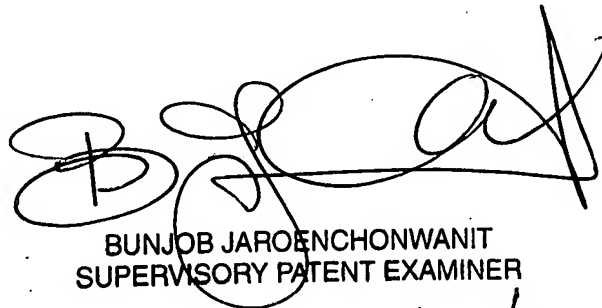
action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Dailey whose telephone number is 571-270-1246. The examiner can normally be reached on Monday thru Friday; 9:00am - 5:00pm.
44. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2152

45. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


TJD
8/25/2007


BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER
8/29/7